The Birth of Melbourne's Docks

The arrival of new settlers and goods in the 1840s and 50s saw the development of a shipping dock along the Yarra's North Bank.

By the 1870s, the South Bank had flourished into a 'nursery of industry' where shipwrights, boat builders, blacksmiths, foundries, mills and factories existed to service the adjacent shipping industry.

During the nineteenth century, three dry docks were built along the South Bank that provided ship repair and maintenance services. One of these was known as Duke's Dock, established by George Duke in 1874-5. It was progressively enlarged to 160m in order to accommodate the largest steamers of the day.

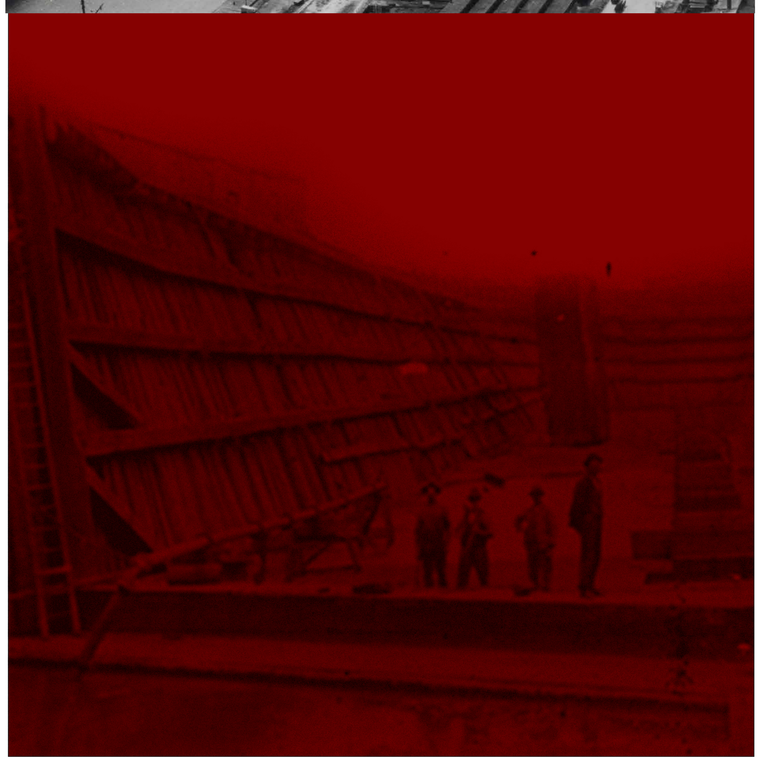
It ceased operations in 1975 when the Charles Grimes bridge precluded navigation. In the 1990s, the dock was truncated by the Melbourne Exhibition Centre, and is now the home of the Polly Woodside.

TOP: Aerial of the Duke's Dry Dock 1972. Duke's and Orr's Amalgamated Dry Docks Ltd Collection, University of Melbourne.

ABOVE: George Duke looking across the river to his new dry dock in 1876. Duke's & Orr's Dry Dock *by Arthur E. Woodley and Bob Botterill (Melbourne Maritime Museum, 1985)*

BELOW: View of Yarra River about 1925 with the Duke's and Orr's Dry Dock to the right. Duke's and Orr's Amalgamated Dry Docks Ltd Collection, University of Melbourne.

BOTTOM: Gate sill with the dry dock behind, 1903. Duke's and Orr's Amalgamated Dry Docks Ltd Collection, University of Melbourne.



Boilers – Steam and Coal Fire

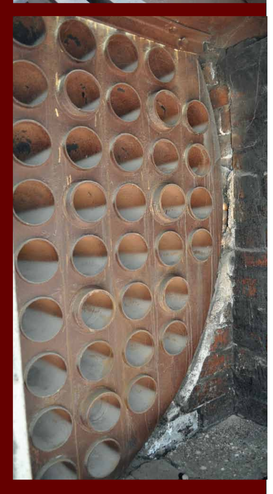
These are the boilers which, along with the adjacent Pump House, were completed by 1904 as part of the reconstruction of Duke's Dock. *

Coal was burnt in the brick-lined furnaces beneath the boiler drums to heat the water within and convert it to steam. The water was further heated by running the hot combustion gases through 'fire tubes' inside the boiler before exhausting the gases through the chimney. Steam accumulated in the top of the boiler drums and was drawn off to supply the pumping engines.

The steam exhausted from the engines was discharged upwards at the base of the boilers' chimney to increase the furnace draft, similar to a steam locomotive. The boiler attendant - or 'fireman' - was responsible for maintaining the correct water level in the boiler drums at all times as well as manually stoking the furnaces.

The boilers remained in operation until the dry dock closed in 1975.

* *Technically, the boilers were a pair of coal fuelled, under-fired, multi-tubular boilers which produced steam at a nominal pressure of 120 psi (830 kPa) for the steam powered pumping plant. The boilers, steam engines and pumps were made by Robison Bros & Co. of South Melbourne, c 1903.*



TOP: Top of boiler drums showing main steam stop valve and safety valve.

ABOVE: Some of the boiler drum 'fire tubes' behind the upper cast-iron doors.

BELOW: Entrance to Duke's Dock with mitre gates closed and pumps in action, around 1947. Pictures Collection, State Library of Victoria.